

We claim:-

1. A mixing device comprising a shaft (1), a front ring (2) and
5 an end ring (3) connected to the shaft at a distance A from each other, and a loose mixing ring (4), which is freely rotatable and can be moved back and forth between the front ring and the end ring, wherein
 - 10 the front ring and the end ring in each case have at least one channel (2k) or (3k), respectively, which runs axially parallel, at an angle in relation to the axis of the shaft or helically, and has in each case at least two regions of
15 different outside diameters, of which the region with the smaller outside diameter is respectively located on the side facing the mixing ring, and
20 the mixing ring has a first region in which its inside diameter is large enough for it to be able to overlap with the region of smaller diameter of the front ring, has an adjoining second region, and also an adjoining third region, in which its inside diameter is large enough for it to be able to overlap with the region of smaller diameter of the
25 end ring and the mixing ring is so long that, in its respective end positions, the other of the two rings (2) or (3) respectively is partially overlapped,
characterized in that
 - 30 the mixing ring has on its inner side of the second region at least two channels (4k) which run axially parallel and are arranged offset in relation to each other.
 2. The device as claimed in claim 1, wherein the shaft has a
35 smooth surface on the section between the front ring and the end ring.
 3. The device as claimed in at least one of claims 1 to 2,
40 wherein the shaft has at least one circumferential channel (1k) on the section between the front ring and the end ring.
 4. The device as claimed in at least one of claims 1 to 3,
45 wherein the device can be connected on both sides to an adjacent device.

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5. The use of the device as claimed in at least one of claims 1 to 4 as a mixing element in a screw machine.
6. The use of the device as claimed in claim 5 in connection with a screw tip (5).
7. A screw machine, comprising at least one device as claimed in at least one of claims 1 to 4.

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